Office of Regulatory Staff

Review of Duke Energy Progress, LLC Application for Approval of Rider DSM/EE-10 October 15, 2018

DOCKET NO. 2018-255-E

EXECUTIVE SUMMARY

In Duke Energy Progress, LLC's ("DEP" or "Company") Application for Approval of Rider Demand Side Management ("DSM") and Energy Efficiency ("EE")-10 ("Application"), the Company is seeking recovery of $33,347,498 with $23,599,525 (or 71%) attributed to residential customers and $9,747,973 (or 29%) attributed to general service customers to cover the revenue requirements of Rider DSM/EE-10. This report details the Office of Regulatory Staff's ("ORS") findings and recommendations based on its review of the Company's Application, programs, and cost recovery mechanism. Based on its review, ORS recommends the following adjustments:

- A reduction of $560.18 to the Company's total system program costs due to insufficient supporting documentation and an additional reduction of $7,405.76 to South Carolina program costs to reflect a change the Company made in the allocation of incentive costs. Since the impact on the proposed rates from these adjustments are negligible, correcting journal entries will be made by the Company prior to their next annual filing.
- A reduction to the proposed Residential rate from 1.050 to 1.049 to account for a calculation error in the Residential Energy Conservation Discount ("RECD") Adjustment contained in Exhibit 1 of the Company's Application.

The effects of the adjustments on the billing factors is included in Exhibit 1 of this report, and the rates are shown in the table below.

DSM/EE Rider	Requested Rider 10 Rate (¢/kWh)	Adjusted Rider 10 Rate (¢/kWh)
Residential	1.050	1.049
General Service	0.636	0.636

ORS finds that the Company's programs are achieving higher than forecasted savings. The Company's portfolio, excluding the Distribution System Demand Response ("DSDR") Program, exceeded forecasted 2017 energy savings by 8.5%, and achieved 100% of the forecasted peak demand reduction. The DSDR Program provided an additional system energy savings of 35,518,685 kilowatt-hours ("kWh") and peak demand savings of 334,505 kilowatts in 2017. With ORS's recommended adjustments, ORS finds that the updated Rider DSM/EE-10 was developed in accordance with the terms and conditions set forth by the

Commission in Docket Nos. 2008-251-E and 2015-163-E and is based on reasonable estimates of participation in the Company's programs.

BACKGROUND AND INTRODUCTION

The Company's South Carolina DSM/EE mechanism was established in the stipulation filed on January 23, 2009 in Docket No. 2008-251-E ("Stipulation") and approved by Commission Order No. 2009-373, dated June 26, 2009. Tariffs for the initial set of DSM/EE programs covered under this mechanism were filed in Docket No. 2009-190-E on May 11, 2009, with the initial proposed cost recovery application filing following in Docket No. 2009-191-E on the same date. The Company's initial cost recovery application covered nine (9) DSM and EE programs, with six (6) programs targeting residential customers, two (2) targeting commercial and industrial customers and one (1) program available to all customers.

The 2009 Stipulation set forth the Company's original DSM/EE mechanism and methodology for recovery of prudently incurred DSM/EE program costs, net lost revenues and a program performance incentive ("PPI") equal to 8% of the net savings for DSM programs and 13% of net savings for EE programs (the "Original Mechanism"). DSM/EE costs were to be amortized over a period not to exceed ten (10) years; net lost revenues were not amortized and were recovered only for the first thirty-six (36) months after the installation of a measure; and the PPI was amortized using a ten (10) year amortization period. Net lost revenues and the PPI were to be trued-up following the completion and review of a program's impact evaluation. Large commercial customers using more than 1 million kWh annually and all industrial customers were eligible to opt out of DEP's DSM/EE programs. Customers that opted out received a DSM/EE credit. All residential customers paid the residential DSM/EE Rider rate. Since the initial cost recovery filing, five (5) additional annual cost recovery applications were approved under the Original Mechanism in Docket Nos. 2010-161-E, 2011-181-E, 2012-93-E, 2013-76-E, and 2014-89-E.

Order No. 2015-596 in Docket No. 2015-163-E approved a new cost recovery and incentive mechanism for DSM and EE programs (the "Revised Mechanism"), to be effective January 1, 2016. Under the Revised Mechanism, DSM/EE costs are to be amortized over a period not to exceed three (3) years, rather than the ten (10) year period used under the Original Mechanism. As in the Original Mechanism, the Company earns a return on unamortized balances at the most recently approved net-of-tax rate of return. Under the Revised Mechanism, net lost revenues are reduced by "Net Found Revenues", which are any increases in revenues resulting from any new activity by DEP that causes a net increase in any customer's demand or energy consumption. The order includes a "Decision Tree" to assist in determining which activities may produce Net Found Revenues. As in the Original Mechanism, net lost revenues are not amortized and are recovered only for the first thirty-six (36) months after the installation of a measure. The Revised Mechanism modifies the PPI to 11.75% of the net savings of the entire DSM/EE portfolio, excluding any low-income programs, education programs, and research and development activities not directly associated with a DSM/EE program. As is the case with DSM/EE costs, the PPI will be amortized over a three (3) year period. The Company is also eligible, under the Revised Mechanism, to receive a $75,000 bonus should it achieve incremental energy savings equal to one percent (1%) of the prior year's retail electricity sales during the five (5)-year period 2015 through 2019. The Company filed the first Application under the Revised Mechanism on September 1, 2015 – the Application for approval of Rider DSM/EE-7 which, with certain modifications, became effective January 1, 2016.

On August 1, 2016, the Company filed an Application for approval of Rider DSM/EE-8 to become effective January 1, 2017. ORS, in accordance with the terms of the approved settlement agreement and Commission Order No. 2015-596, conducted a review of DEP's filing and approved the Company's filing with certain modifications that reduced the Company's requested Residential rate rider.

On August 1, 2017, the Company filed an Application for approval of Rider DSM/EE-9 to become effective January 1, 2018. ORS, in accordance with the terms of the approved settlement agreement and Commission Order No. 2015-596, conducted a review of DEP's filing and approved the Company's filing with certain modifications that were to be applied to the Company' 2018 filing.

On August 1, 2018, the Company filed an application for approval of Rider DSM/EE-10. ORS, in accordance with the terms approved in Commission Order No. 2015-596, conducted a review of DEP's filing which included an evaluation of the three (3) major cost components associated with the Company's DSM and EE programs, -- Program Costs, Net Lost Revenues and PPI. ORS audited the Company's costs for the period of January 1, 2017 to December 31, 2017 ("Test Period"). ORS also reviewed the Company's cost estimates for the period of January 1, 2018 to December 31, 2018 ("Rate Period"). The Company is requesting the updated Rider DSM/EE-10 be effective for service rendered on and after January 1, 2019.

TABLE 1: DSM/EE PROGRAMS

The Company's filing includes a request for cost recovery encompassing nineteen (19) DSM/EE programs. The programs and the launch dates of each program are as follows:

Residential Programs	
Residential Home Advantage Program	01/01/2009
Residential Load Control Program (EnergyWise™)	04/01/2009
Energy Efficient Benchmarking / My Home Energy Report	05/06/2009
Solar Water Heating Pilot	06/01/2009
Home Energy Improvement	07/01/2009
Residential Low Income – Neighborhood Energy Saver	10/01/2009
Residential Lighting	01/01/2010
Appliance Recycling	04/15/2010
Residential New Construction	01/01/2012
Multi Family Energy Efficiency	06/01/2014
K12 Performance – National Theater	06/01/2014
Save Energy and Water Kit	11/01/2015
Commercial and Industrial Programs	
CIG Energy Efficiency	05/01/2009
CIG Demand Response Automation	05/01/2011
Small Business Energy Saver	11/01/2011
General Service Lighting	04/01/2013
Business Energy Report	12/30/2015
EnergyWise Business	01/04/2016
Programs for All Customers	
Distribution System Demand Response ("DSDR")	04/01/2008

- The Residential Home Advantage Program was terminated March 31, 2013 because of higher buildings standards and Energy Star standards that went into effect in 2013, making the program no longer cost effective. The program was replaced by the Residential New Construction Program.

- While neither the Solar Water Heating Pilot nor the Residential Home Advantage Program are active programs, due to the amortization period in effect when these program costs were incurred, remaining unamortized program costs and PPI are included in Rider DSM/EE-10.

- The Company's implementation vendor for the Appliance Recycling Program went into receivership and discontinued operations on November 19, 2015. Although the Company continues to evaluate options with the other vendors that offer appliance recycling, the Company has found that increased costs and required limitations on the program negatively impact the program's viability. The Company does not currently plan to revive this program.

- The Company has added three new programs since the 2015 filing – the residential Save Energy and Water Kit Program, the Business Energy Report and the EnergyWise Business Program. The residential Save Energy and Water Kit Program was launched in November of 2015. It offers participants a free kit including bath aerators, kitchen aerators, shower heads, pipe insulation tape and installation instructions. The program targets residential customers living in single family homes with electric water heaters.

- The Business Energy Report provides a comparative usage report that compares a customer's energy use to their peer groups along with actionable ideas to help them become more energy efficient. The program was launched as a pilot on December 30, 2015, and initial reports were distributed to participants in February 2016. However, after an internal analysis of energy savings and future viability concerns regarding the vendor administering the pilot, the Company terminated the pilot effective August 31, 2017.

- The EnergyWise Business program was launched on January 4, 2016. This program provides the advantages of the residential EnergyWise program to business owners. In return for an incentive, the business owner allows the Company to control the operation of the participants' air conditioning units to mitigate system capacity constraints and improve the reliability of the power grid.

- Based on Evaluation, Measurement & Verification ("EM&V") reports, the Company determined that a significant portion of efficient lighting products sold under the Residential Lighting Program were purchased for commercial use. This caused the Company to split the original program into two programs – Residential Lighting and General Service Lighting.

- The DSDR Program is not a typical DSM/EE program. It is a system of electric equipment and operating controls designed to enable the Company to reduce peak demand using the distribution system to reduce generation requirements. Included in the system are new line voltage regulators, additional phase wires, the relocation and addition of line capacitors, modifications of tap line configurations, sensors and intelligent controls on equipment and substations, the enhancement of information technology systems, and a new two-way communications system.

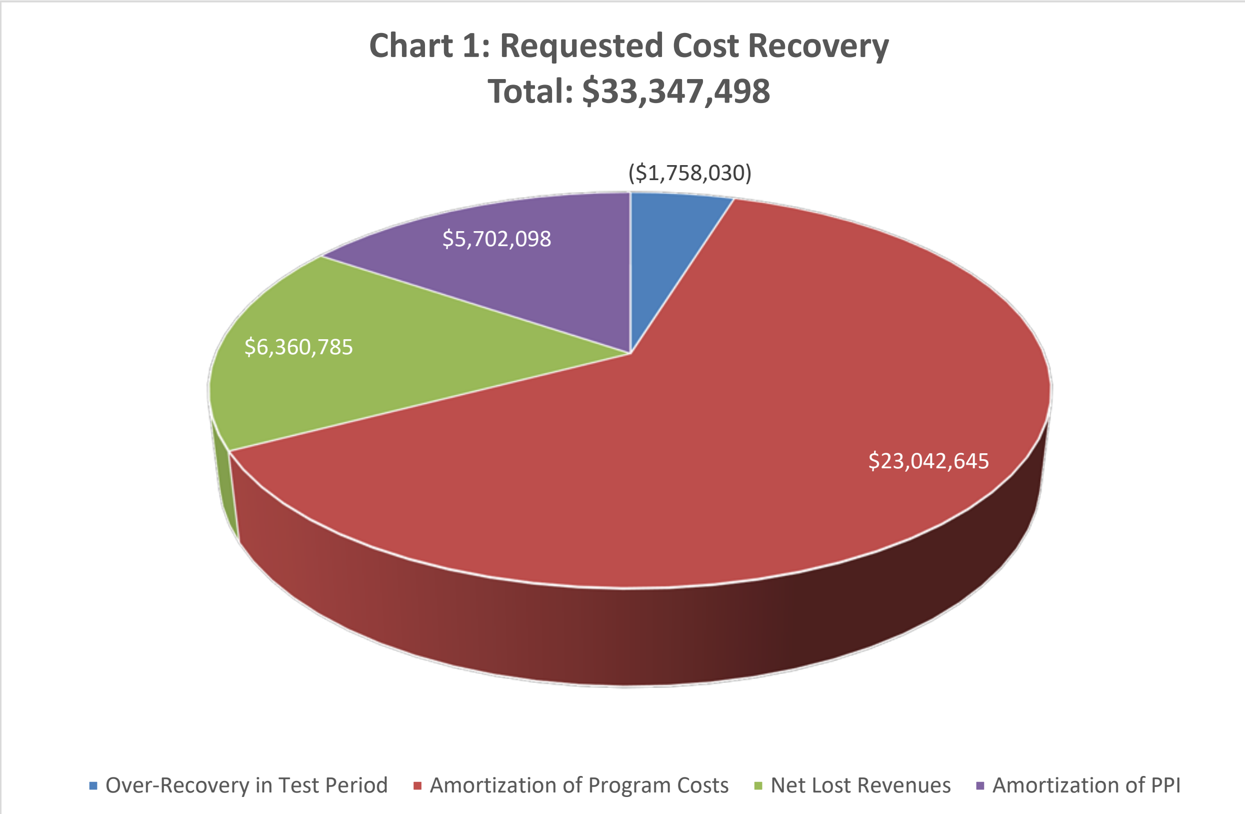
- The Company does not earn PPI for the DSDR Program, the Residential Low-Income Program, the Residential Solar Hot Water Pilot, or the K12 Education Program. In addition, under the Original Mechanism, the Company excludes from the PPI computation any programs that do not achieve a Total Resource Cost ("TRC") test result of 1.0 or higher.

- The 2013 vintages of the Residential Home Advantage, Residential Home Energy Improvement, Residential New Construction, and Small Business Direct Install programs did not meet the TRC threshold and were thus excluded from the PPI computation. In addition, the 2014 vintage of the Residential Home Energy Improvement Program was excluded from the PPI computations on the same basis. For 2016, 2017 and 2018, even though the Residential Home Energy Improvement Program again failed the TRC test, under the Revised Mechanism the entire portfolio of programs receives a uniform PPI if the portfolio as a whole passes the TRC test, which was the case in this filing.

PROGRAM COST EVALUATION

The total cost requested for recovery by DEP in this filing is $33,347,498. For this requested amount, the Company projects an energy savings of 341,047,135 kWh in 2019, which equates to 9.78 ¢/kWh saved in 2019. Assuming an average five (5)-year life for the measures installed, the lifetime costs average 1.96 ¢/kWh-saved.

The total amortized cost of $33,347,498 is comprised of program costs, net lost revenues, PPI, and an over-recovery resulting from the Test Period. The Company's Revised Mechanism allows DEP to amortize program costs and PPI, with carrying costs, over three (3) years. Program costs reflect a request of $23,042,645 (or 69%) of the total amortized cost. PPI, which is associated with savings resulting from the implementation of DSM and EE programs, reflects a request of $5,702,098 (or 17%) of the total amortized cost. The Company is also requesting recovery for Net Lost Revenues of $6,360,785 (or 19%) of the total amortized amount, and a reduction of $1,758,030 (or -5%) of the total amortized cost to account for an over-recovery of actual program costs during the Test Period. However, DEP does not amortize its Net Lost Revenues or any over/under recoveries from prior periods, as they are fully recovered during the Rate Period. The breakdown of the total requested cost recovery is shown in Chart 1 below:



A breakdown of the major cost components of this filing and the development of the billing factors is shown in Exhibit 1 of this report. The requested revenues from residential customers are recovered from all residential ratepayers, while the non-residential revenues are recovered solely from those non-residential ratepayers that do not opt-out of the programs.

EVALUATION, MEASUREMENT & VERIFICATION

The Company has received the following EM&V reports for the 2016 vintages of DEP's programs:

- 2016 EM&V Report for the Duke Energy Progress Commercial, Industrial and Governmental Demand Response Automation (DRA) Program
- Energy Efficiency Education in Schools Program Year 2015-2016 Evaluation Report
- EM&V Report for the EnergyWise Home Report
- EM&V Report for the EnergyWise Home Demand Response Program
- EM&V Report for the Duke Energy Multifamily Energy Efficiency Program
- Duke Energy Carolina/Duke Energy Progress Non-Residential Prescriptive Program Evaluation Report – Final
- Duke Energy Carolinas and Progress EnergyWise for Business Programs Evaluation Report – Final
- Duke Energy Progress & Duke Energy Carolinas Energy Efficient Lighting & Retail LED Programs Evaluation Report – Final
- My Home Energy Report Program Evaluation
- EM&V Report for the Small Business Energy Saver Program
- Save Energy and Water Kits 2016 Program Year Evaluation Report

These EM&V reports were used by the Company to true-up the 2016 vintages of these programs in this filing.

ESTIMATES USED IN THE FILING

For the most part, the programs' avoided energy amounts, avoided capacity amounts, net lost revenues, and PPI amounts are estimates that were developed using the DSMore model and the Company's most recent planning data. Thus, nearly all the dollar amounts in the filing, with the exception of the Test Period program costs and the trued-up vintages of certain programs, are estimates. The estimated values and dollar amounts will be trued-up in future filings, based on EM&V results. ORS is familiar with the DSMore model and finds it to be a reasonable tool for this purpose.

FORECASTED RETAIL SALES

For the computation of rates for this filing, the Company has utilized the Spring 2018 forecast of retail sales. ORS is familiar with the methodology used to generate the sales forecast and finds it to be a reasonable approach to establish rates.

ENERGY AND PEAK DEMAND SAVINGS

The Company projects that by the end of 2019 the DSM and EE programs will have reduced annual electric usage by a cumulative 2,432,385 megawatt-hours and will have the capability to reduce the annual one-hour peak usage by 461 megawatts. These are considerable savings and may provide DEP the ability to avoid or defer the construction of any required new generating facilities.

OPT-OUTS

In the Company's 2017 filing, 190 commercial and industrial customers, or 63.8% of DEP's commercial and industrial load, opted out of the Company's DSM and EE programs. In this filing, the Company reports that, as of December 31, 2017, 173 commercial and industrial customers have chosen to opt-out of its DSM and EE programs, or 62.6% of DEP's commercial and industrial load. Two commercial and industrial customers elected to opt-in to the programs in 2017.

RATE IMPACT

The approved rates for DSM/EE Rider-9 and the Company's requested rates for Rider DSM/EE-10 are shown in Table 2.

Table 2: Comparison of Current and Requested Rates

DSM/EE Rider	Approved Rider 9 (¢/kWh)	Requested Rider 10 (¢/kWh)	Increase (¢/kWh)	Percentage Increase (%)
Residential	1.282	1.050	-0.232	-18%
General Service	0.773	0.636	-0.137	-18%

The decreases in the residential and general service rates are largely due to the over recovery of program costs in previous years that is corrected in the true-ups in this filing.

CONCLUSION

ORS recommends the following adjustments to the Company's request in this filing:

- A reduction of $560.18 to the Company's total system program costs due to insufficient supporting documentation and an additional reduction of $7,405.76 to South Carolina program costs to reflect a change the Company made in the allocation of incentive costs. Since the impact on the proposed rates from these adjustments are negligible, correcting journal entries will be made by the Company prior to their next annual filing.

- A reduction to the proposed Residential rate from 1.050 to 1.049 to account for a calculation error in the RECD Adjustment contained in Exhibit 1 of the Company's Application.

ORS finds that with the recommended adjustments, the updated Rider DSM/EE-10 was developed in accordance with the terms and conditions set forth by the Commission and is based on reasonable estimates of participation in the Company's DSM and EE programs. ORS recommends the approval of the following adjusted Rider DSM/EE-10 rates as illustrated in Table 3.

Table 3: Adjusted Rate Recommendation

DSM/EE Rider	Approved Rider 9 (¢/kWh)	Adjusted Rider 10 (¢/kWh)	Increase (¢/kWh)	Percentage Increase (%)
Residential	1.282	1.049	-0.233	-18%
General Service	0.773	0.636	-0.137	-18%

Exhibit 1 of this report details the development of the requested rates as adjusted.

If approved as adjusted, the change in Rider DSM/EE-10 for an average residential customer using 1,000 kWh per month will decrease the customer's monthly bill by approximately $2.33. The Company is requesting the updated rates associated with Rider DSM/EE-10 be effective for service rendered on and after January 1, 2019.

Exhibit 1

DEP Revenue Request for DSM/EE Programs
Rider DSM/EE-10
For the Rate Period of January 1, 2019 - December 31, 2019

		Residential		General Service		Totals		Grand Total
		EE Portion	DSM Portion	EE Portion	DSM Portion	EE Portion	DSM Portion	
(1)	Test Period Over/Under Recovery as of December 31, 2017	$1,046,947	$1,106,890	($1,699,789)	($2,212,078)	($652,842)	($1,105,188)	($1,758,030)
(2)	Rate Period Estimated Program Costs excluding DSDR	$6,086,770	$1,803,479	$3,476,937	$665,219	$9,563,707	$2,468,698	$12,032,405
(3)	DSDR Rate Period Estimated Program Costs	$0	$527,504	$0	$271,502	$0	$799,006	$799,006
(4)	Rate Period Amortized Program Costs	$2,755,441	$601,160	$1,158,979	$221,739	$3,914,420	$822,899	$4,737,319
(5)	DSDR Costs	$0	$3,076,827	$0	$1,583,962	$0	$4,660,789	$4,660,789
(6)	Prior Period Amortization	$4,979,532	$2,002,583	$3,563,158	$412,949	$8,542,690	$2,415,532	$10,958,222
(7)	A&G and Carrying Costs	$1,199,490	$581,143	$732,278	$173,404	$1,931,768	$754,547	$2,686,315
(8)	**Total Revenue Requested for Program Costs = (4)+(5)+(6)+(7)**	**$8,934,463**	**$6,261,713**	**$5,454,415**	**$2,392,054**	**$14,388,878**	**$8,653,767**	**$23,042,645**
(9)	Net Lost Revenues	$2,876,881	$0	$3,469,416	$14,488	$6,346,297	$14,488	$6,360,785
(10)	Amortization of PPI	$1,892,023	$1,480,608	$2,191,485	$137,982	$4,083,508	$1,618,590	$5,702,098
(11)	**Total Revenue Request = (1)+(8)+(9)+(10)**	**$14,750,314**	**$8,849,211**	**$9,415,527**	**$332,446**	**$24,165,841**	**$9,181,657**	**$33,347,498**
(12)	South Carolina Rate Class KWh Sales	2,275,569,267	2,275,569,267	1,539,809,622	1,532,984,010			
(13)	Initial Rate Riders (¢/kWh) = 100 x ((11)/(12))	0.648203	0.388879	0.611473	0.021686			
(14)	RECD Adjustment	0.007413						
(15)	Gross Receipts Tax and Regulatory Fee Adjustment	0.004650		0.002720	0.000100			
(16)	**Total Residential Rider (¢/kWh) = (13)EE+(13)DSM+(14)EE+(15)EE**	**1.049**						
(17)	**Total General Service Rider (¢/kWh) = (13)EE+(13)DSM+(15)EE+(15)DSM**			**0.636**				